

IN THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

1-29. (Canceled)

30. (Currently Amended) A method for analyzing a drug-dosed sample using a Mass Spectrometer, said method comprising the steps of:

ionizing a drug-dosed sample to produce sample ions;

wherein said sample comprises several metabolic products;

introducing said ions into an analysis region of said mass spectrometer;

continuously monitoring said ions;

detecting changes to said sample;

determining a molecular weight of each species metabolic product present in said sample to determine an empirical formula for each metabolic product of said sample; ~~and~~
dynamically calculating and then displaying the error associated with each
determination of a molecular weight of each said metabolic product present in said
sample; and

identifying each species by comparing said empirical formula to a database of formulas for known molecules.

31. (Previously Presented) A method according to claim 30, wherein said database is updated with changes that are detected.

32. (Currently Amended) A method according to claim ~~33~~ 30, wherein said mass spectrometer is selected from the group consisting of a Fourier Transform Mass Spectrometer (FTMS), a Tandem Mass Spectrometer, and an Ion Cyclotron Resonance mass Spectrometer.

33. (Previously Presented) A method according to claim 30, wherein said metabolic products are ionized using Atmospheric Pressure Ionization (API).